

exercise, to place an egg in it with the quickness of thought! But think you that this egg is merely laid in the usurped stigma? It must be fixed there, glued by a gummy liquor; and I have proved that a *sebific gland* exists for this purpose in the oviduct of the Diptera. Without this precaution the egg would be exposed to displacement during the constant action of the respiration of the beetle.

But this is not all that takes place. When the parasitic larva has completed its growth, it is called upon to undergo its metamorphosis to a pupa. No delay is allowed it; it detaches itself from the borrowed stigma,—its skin breaks its organic adhesions; its whiteness and transparency pass to a bright, opaque orange. It is nothing but a shell, the covering of a nymph, the swathed and mysterious image of the future fly.

I have said above that the living prison of the larva was without air and without issue; how then is the exit of these pupæ effected? Alas! this unnatural delivery costs the weevil its life. After its detachment, the larva, no doubt obeying an instinctive mission, tears the upper membranous coat of the apex of the beetle's abdomen. It fixes itself in this breach and there completes its transformation into a pupa. The maturity of this causes slight movements in the inclosed nymph, at the same time that by its titillation it provokes the expulsive efforts of the weevil. At last the pupa comes to light; it soon splits and opens at its thoracic region, and the active *Hyalomyia* darts into the air.—*Comptes Rendus*, 11 Août, 1851.

RARE IRISH MOLLUSCA.

To the Editors of the Annals of Natural History.

Shantalla, September 18th, 1851.

GENTLEMEN,—The following rare Mollusca were recently obtained by dredging round the South Isles of Aran, Galway Bay:—

Neæra cuspidata; in 60 fathoms, about twelve miles to the westward of the Great S. Isle.

Tellina balaustina; two specimens alive with numerous single valves, in 20 fathoms, South Sound of Aran, opposite the southern point of the Middle Isle.

Anomia striata; depth uncertain, South Sound.

Nassa pygmæa; range 10 to 60 fathoms.

Buccinum Humphreysianum; a single young specimen alive, in 60 fathoms, along with *Neæra cuspidata*, *Natica sordida*, &c.

I am, Gentlemen, your obedient servant,

ALEXANDER G. MELVILLE.

On the Umbrella Bird (*Cephalopterus ornatus*), “*Ueramimbé*,” L. G.

By ALFRED R. WALLACE.

Having had the opportunity of observing this singular bird in its native country, a few remarks on its characters and habits may not perhaps be uninteresting, at a time when a consignment from me will have arrived in England.

The Umbrella Bird is about the size of a crow, averaging about 18 inches in length. Its colour is entirely black, but varied with metallic blue tints on the outer margin of the feathers. The colour of the iris is greyish white. It is a powerful bird, the bill being very large and strong, the feet short, and the claws acute.

Were it not for its crest and neck plume, it would appear to an ordinary observer nothing more than a short-legged crow.

The crest is perhaps the most fully developed and beautiful of any bird known. It is composed of long slender feathers, rising from a contractile skin on the top of the head. The shafts are white and the plume glossy blue, hair-like, and curved outward at the tip. When the crest is laid back the shafts form a compact white mass, sloping up from the top of the head, and surmounted by the dense hairy plumes. Even in this position it is not an inelegant crest, but it is when it is fully opened that its peculiar character is developed. The shafts then radiate on all sides from the tip of the head, reaching in front beyond and below the top of the beak, which is completely hid from view. The top then forms a perfect, slightly elongated dome, of a beautiful shining blue colour, having a point of divergence rather behind the centre, like that in the human head. The length of this dome from front to back is about 5 inches, the breadth 4 to $4\frac{1}{2}$ inches. The other singular appendage of this bird is the neck plume. This is a long cylindrical plume of feathers depending from the middle of the neck, and either carried close to the breast or puffed out and hanging down in front. The feathers lap over each other, scale-like, and are bordered with fine metallic blue.

On examining the structure of this plume, it is found not to be composed of feathers only, growing from the neck, as seems to have been hitherto supposed. The skin of the neck is very loose; looser and larger, in fact, than in any bird I know of. From the lower part grows a cylindrical fleshy process about as thick as a goose-quill and an inch and a half long. From this grow the feathers to the very point, thus producing the beautiful cylindrical plume quite detached from the breast, and forming an ornament as unique and elegant as the crest itself.

When in motion, either flying or feeding, the crest is laid back and the plume carried close to the breast, so as not to be conspicuous. When at rest in the daytime, the crest is fully expanded, and the plume is rather enlarged and hanging forward. At night, when asleep, all the feathers are puffed out to their fullest extent, and sometimes the head is turned so as to bring the dome of the crest on the middle of the back. It then presents a most singular appearance, the head and feet being quite invisible, the plume and crest alone being conspicuous amidst the mass of feathers.

These observations I was enabled to make by having a fine male alive for ten days. He had received a shot in the head, but appeared to suffer no ill effects from it, till on the tenth day he suddenly fell off his perch and died. I found, on skinning him, that the shot had broken his skull and entered the brain.

The Umbrella Bird inhabits the islands of the rivers, never having

been seen on the main land. It is perfectly arboreal, never descending to the ground. Its food is fruit of various kinds, but when this is scarce it eats insects: my hunter saw one with a large hairy spider (*Mygale*) in his mouth. On seizing an insect or fruit, it strikes its beak against its perch several times, apparently to kill or soften it, or secure it more firmly in its beak, and then after two or three bites swallows it entire. Some of the fruits it eats are about the size of a damson, and have a stone, which it ejects through its mouth an hour or two after eating.

Its note is very loud and deep, and it is from this that it has received its Indian name "Ueramimbé," signifying the "Piper-bird." It utters its note early in the morning and in the afternoon. It frequents the very loftiest forest trees, but is said to build its nest rather lower. Its nest is said to be formed of sticks very roughly, and the young are very naked and ugly. The colour or size of the eggs I have not been able to ascertain.

In ascending the Amazon, it first occurs opposite the mouth of the Madeira, in some islands. In the Solhuives, as far as the boundaries of Brazil, it also occurs, and probably further. The Rio Negro, however, is its head-quarters; and there, in the numerous islands which fill that river, it is very abundant. It extends at least four hundred miles up the river, and very probably much further. I have not heard of its occurring in the Rio Branco, Madeira, or any of the other great tributaries of the Amazon. I have been informed by a hunter, that towards the sources of the Rio Negro another species is found, and this I hope soon to have the means of verifying.—*Proc. Zool. Soc. for July 23, 1850.*

Barra do Rio Negro, March 10th, 1850.

On the Genera Hexapus and Arges of De Haan.
By J. D. DANA.

The genus *Hexapus* of De Haan, in his first publication of its characters (in Decade I. and II. of the Fauna Japonica, pp. 5 and 35) is arranged near *Pinnothera*, which it resembles in its short obese form and small size. But in his last Decade, published in 1849, which contains his final remarks on classification, at p. xiv., the genus is referred to the vicinity of *Pilumnus*. The outer maxillipeds are as in *Pilumnus*. The genus is peculiar in the fifth pair of legs being obsolete. The species is the *H. sexpes* (Jap. p. 63 and pl. 11. f. 6, *Cancer sexpes* of Fabricius, Ent. Syst. Suppl. p. 344. f. 37).

The genus *Arges* of De Haan (Faun. Japon. p. 21) includes only a fossil species. It is Cancroid in its outer maxillipeds, and near *Pilumnus* and also *Menippe*. The abdomen in both sexes is 7-jointed; in the male oblong-trigonal, in the female ovate. The lateral margins of the carapax are parallel and entire, and the general form is much like that of *Cyclograpsus Audouinii* and the allied. Distance between the eyes one-fifth the breadth of the thorax.—Sp. *A. parallelus* (F. Jap. p. 52, and pl. 5. f. 4) from Japan.—*Silliman's American Journal of Science and Arts for September 1851.*